A FLORISTIC SURVEY OF BIG BRANCH MARSH NATIONAL WILDLIFE REFUGE, ST. TAMMANY PARISH, LOUISIANA

David J. Rosen

U.S. Fish and Wildlife Service
Clear Lake Ecological Services Field Office
17629 El Camino Real, Suite 211
Houston, TX 77058-3051, U.S.A.

Stanley D. Jones

Herbarium
Botanical Research Center
P.O. Box 6717
Bryan, TX 77805-6717, U.S.A.

Virginia E. Rettig

U. S. Fish and Wildlife Service
Cat Island National Wildlife Refuge
P.O. Box 1936
St. Francisville, LA 70775, U.S.A.

ABSTRACT

Big Branch Marsh National Wildlife Refuge is a U.S. Department of the Interior Fish and Wildlife Service complex comprising approximately 5,870 ha (14,500 acres). A floristic survey was conducted to provide refuge staff with a checklist of vascular plant species, along with species abundance and habitat preference when one existed. Collecting trips made to the refuge from August 1999 through April 2002 yielded 563 infraspecific taxa of vascular plants representing 117 families and 309 genera. The four largest families are Poaceae, Cyperaceae, Asteraceae, and Fabaceae. Descriptions of salient plant communities are provided.

RESUMEN

El Refugio Nacional de Vida Salvaje de Big Branch Marsh es un complejo del Servicio del Departamento de Pesca Interior y Vida Salvaje de los Estados Unidos que tiene aproximadamente 5,870 ha (14,500 acres). Se realizó un estudio florístico para ofrecer al personal del Refugio un listado de las especies de plantas vasculares, junto con abundancia de especies y preferencia de hábitat cuando existía. Los viajes de recolección al refugio de agosto de 1999 a abril de 2002 dieron 563 taxa infraespecíficos de plantas vasculares pertenecientes a 117 familias y 309 géneros. Las cuatro familias más grandes son Poaceae, Cyperaceae, Asteraceae, y Fabaceae. Se ofrecen descripciones de las comunidades vegetales más importantes.

INTRODUCTION

The National Wildlife Refuge System is administered by the U.S. Department of the Interior, Fish and Wildlife Service. The mission of the Refuge System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans. Big Branch Marsh National Wildlife Refuge (BBMNWR), which was established in 1994, is one of over 530 refuges throughout the country and one of 22 refuges in Louisiana. At the onset of this survey, BBMNWR was the last large undeveloped area on the rapidly develop-

SIDA 20(3): 1189–1216. 2003

ing north shore of Lake Pontchartrain. The management objectives of BBMNWR are to provide (1) habitat for a natural diversity of wildlife associated with Big Branch Marsh, (2) wintering habitat for migratory waterfowl, (3) nesting habitat for wood ducks, (4) habitat for non-game migratory birds, and (5) opportunities for public outdoor recreation.

The forested areas of BBMNWR are primarily managed for the federally listed endangered red-cockaded woodpecker (*Picoides borealis*). About 12 clusters of these birds are currently active on the refuge. Red-cockaded woodpeckers build their nests in live pine trees and require an open understory necessitating prescribed burns by refuge personnel every 3—4 years. Refuge marshes are also burned every 2—3 years to improve habitat for wading birds and migratory waterfowl. The understanding and management of any animal community demands (1) defining the plant communities in which they live, (2) defining the surrounding plant communities in which they move in and out of, and (3) identifying the plant species utilized for food, cover, and nesting. As is the case with most National Wildlife Refuges, no detailed floristic study had been conducted on BBMNWR. Therefore, a floristic survey was conducted to provide refuge staff with a checklist of vascular plant species and information on species abundance and habitat preference.

Study Area

BBMNWR is located between 30° 15' 35" and 30° 19' 54"N latitude and 89° 54' 37" and 90° 00' 53"W longitude in St. Tammany Parish, Louisiana (Fig. 1). The refuge lies within the Coastal Plain Province of the Atlantic Plain Division (Fenneman 1928). The refuge headquarters and visitor center are located W of Hwy. 434 at about 30° 19' 17"N, 89° 56' 14"W in the town of Lacombe. Several minor tributaries border and traverse the refuge holdings. The refuge is bounded to the W by Cane Bayou, bisected by Bayou Lacombe and its tributaries, and traversed by Bayou Liberty, Bayou Bonfouca, Cypress Bayou, Bayou due Chien, their tributaries, and other small unnamed tributaries. The most notable refuge boundary is Lake Pontchartrain, a shallow, flat-bottomed fresh to brackish water body with an average depth of approximately 3-m (Steinmayer 1939). The refuge lies entirely within its floodplain between the 0 and 5 foot contour lines. Lake salinity normally ranges from 1 to 10 $^{0}/_{00}$. In recent drought years, however, salinity has reached 20 $^{0}/_{00}$ (pers. obs.). The climate in St. Tammany Parish is temperate with an average winter temperature of 12° C, and a daily minimum average of 5° C. Average summer temperature is 27° C, and the average daily high is 33° C (Trahan et al. 1990). Total annual precipitation is 155 cm, average relative humidity during the day is 60% and is 90% at dawn (Trahan et al. 1990).

The approximately 5870 ha (14,500 acre) refuge is described by refuge staff as predominately a mixture of intermediate and fresh marsh, pine flatwoods,

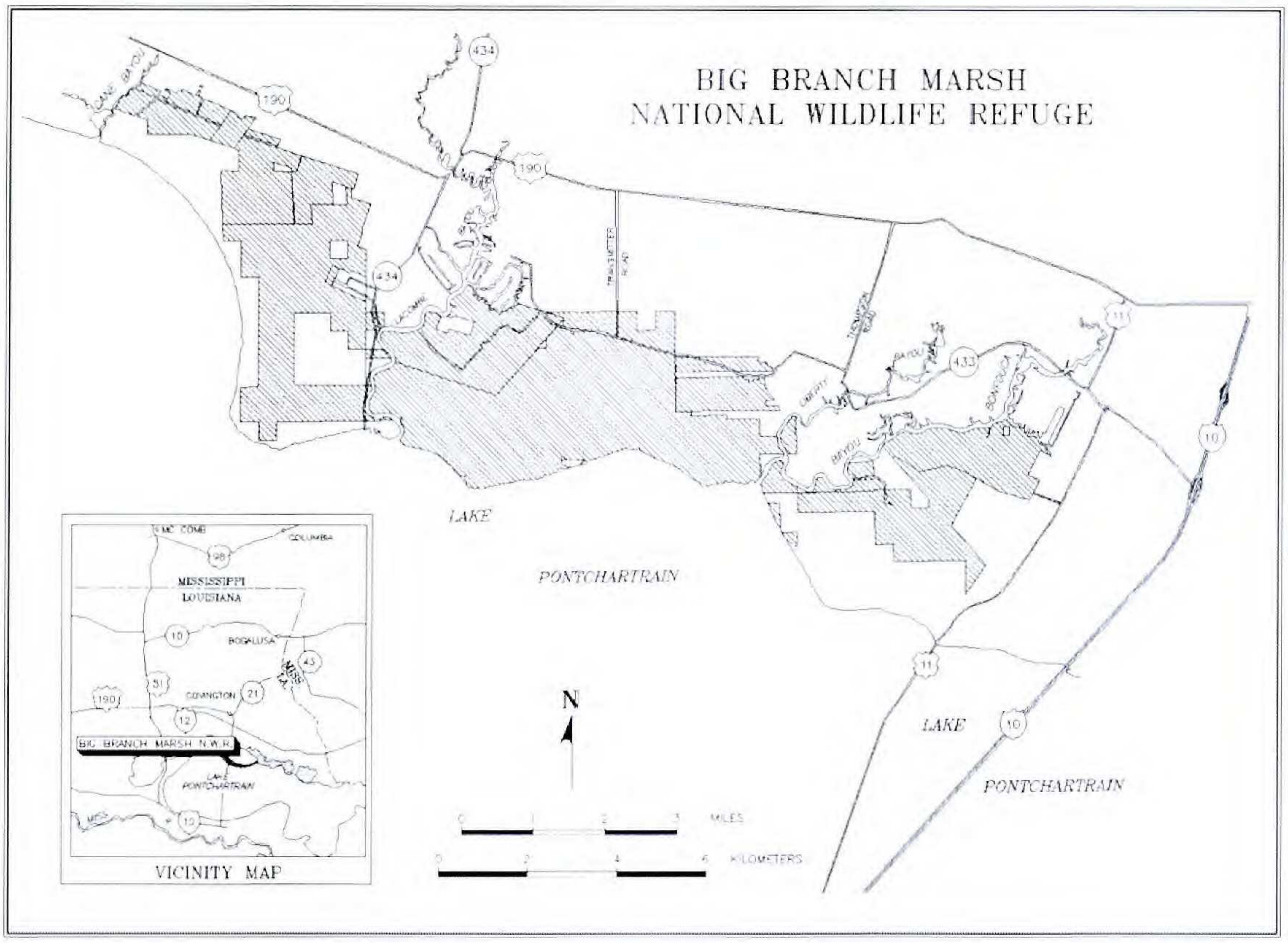

Fig. 1. Map showing location and boundaries of Big Branch Marsh NWR during survey.

pine islands, pine ridges, and hardwood hammocks. The forests in the area were almost completely clear cut early in the 20th century (Ellis 1981). Most of the evergreen forests in the region were dominated by longleaf pine (*Pinus palustris* Mill.) prior to modern silviculture operations and fire suppression. Currently, either slash pine (*P. elliottii* Engelm. var. *elliottii*), loblolly pine (*P. taeda* L.), or longleaf pine are dominant or co-dominant in refuge evergreen forests.

The most notable physiognomic feature of the refuge is a distinct line of demarcation where marsh meets pine flatwoods. The prairie terrace is comprised of consolidated sediments formed during the Pleistocene resulting from rising and falling sea levels and changes in the course of the Mississippi River (Fisk & McFarlan 1955; Saucier 1963). The forested areas of the refuge overlay the terrace. The entire refuge area is subsiding, but the effect is most noticeable in the existing marshes. In some locations, the marsh-forest edge is lined with dead stands of pine trees that have been inundated with brackish lake water.

METHODS

Topographical maps and color infrared aerial photos were examined and interpreted to locate different habitats and plan fieldwork. Collecting trips were made to the refuge from August 1999 through April 2002. The objectives of each trip were the collection of voucher specimens, careful notation of apparent habitat preference, and estimates of abundance of each species. Voucher specimens are housed at the Tulane University Herbarium (NO). Duplicate specimens, when available, were provided to the staff of BBMNWR. Identifications were made using regional manuals including Allen (1992), Correll and Johnston (1970), Cronquist (1980), Gandhi and Thomas (1989), Godfrey (1988), Godfrey and Wooten (1979, 1981), Gould (1975), Isely (1990), and Radford et al. (1968).

RESULTS

Floristics

Collecting trips yielded 563 infraspecific taxa of vascular plants representing 117 families and 309 genera (Table 1). The four families containing the most infraspecific taxa (in parenthesis) are Poaceae (94 spp.), Cyperaceae (64 spp.), Asteraceae (61 spp.), and Fabaceae (25 spp.). One species, *Imperata brasiliensis* (L.) Beauv., is listed by the U.S. Department of Agriculture as a noxious weed. Non native species accounted for 12.8 % of the total species. No Federally-listed threatened or endangered plant species were found.

Plant Communities

The distribution and composition of plant communities on the refuge appear most influenced by the salinity and tidal activity of Lake Pontchartrain and larger tributaries. Other major influences are topography, geology, soil type, weather, historic and ongoing disturbances, and management regimes. Plant communities were described to indicate diversity and uniqueness and to aid in future management practices. The following plant communities were defined by comparing field observations of dominant woody and herbaceous species and hydrological regimes to The Nature Conservancy's *International Classification of Ecological Communities: Terrestrial Vegetation of the Southeastern United States* (ICEC) (Weakly et al. 1998). Plant community names of the ICEC hierarchy are used. Following the ICEC alliance plant community name, the name used by refuge staff is listed in parenthesis. Communities at the alliance and association levels are reported. These are the two lowest communities in the hierarchy of classification listed in the ICEC and are based on floristics. Associations within alliances are discussed under the alliances. Conservation ranks of G3 or lower are reported (G1-critically imperiled globally; G2-imperiled globally; G3-rare or uncommon globally). A myriad of disturbed sites such as borrow pits, ditches, roads, spoil areas, logging ruts, and mowed rights-of-way may occur in each alliance or association, typically supporting a variety of ruderal, wetland, and aquatic species.

Forest Alliances

***Fagus grandifolia–Magnolia grandiflora* Forest Alliance (Beech-Magnolia Woods).** A single representative association of this alliance was found on BBMNWR,

Table 1. Statistical taxonomic summary of the vascular flora of Big Branch Marsh NWR.

			Infraspecific Taxa		
Class	**Families**	**Genera**	**Native**	**Introduced**	**Total**
Lycopodiopsida	1	1	1	_	1
Isoëtopsida	1	1	1	_	1
Polypodiopsida	9	9	8	2	10
Pinopsida	2	2	6	_	6
Liliopsida	24	85	194	21	215
Magnoliopsida	80	211	281	49	330
Totals	117	309	491	72	563

the *Fagus grandifolia* Ehrh. (American beech)–*Magnolia grandiflora* L. (southern magnolia)–*Quercus nigra* L. (water oak)–*Pinus glabra* Walt. (spruce pine)/ *Viburnum dentatum* L. (southern arrow-wood) Association. This association occurs on uplands fringed by the marshes adjacent to Cane Bayou. Common trees in the subcanopy include *Carpinus caroliniana* Walt. (coastal ironwood), *Carya glabra* (Mill.) Sweet. (pignut hickory), and *Quercus falcata* Michx. var. *falcata* (southern red oak). Common shrubs are *Aesculus pavia* L. (red buckeye), *Callicarpa americana* L. (beauty berry), *Erythrina herbacea* L. (coralbean), *Halesia diptera* Ellis. (two-wing silverbell), *Symplocos tinctoria* (L.) L'Her. (sweetleaf), and *Vaccinium arboreum* Marsh. (farkleberry). Southern arrowwood is apparently absent in this association at BBMNWR. Common herbaceous species include *Chasmanthium laxum* (L.) Yates var. *laxum* (slender spikegrass), *Carex* spp. (caric-sedges), and *Panicum* spp. (panic-grasses). This association is easily viewed at the Cane Bayou access area.

***Nyssa aquatica*–(*Taxodium distichum*) Semipermanently Flooded Forest Alliance (Floodplain Swamps).** A single representative association of this alliance was found on BBMNWR, the *Nyssa aquatica* L. (swamp tupelo)–*Nyssa biflora* Walt. (swamp blackgum) Forest Association. This association occurs along a small, meandering, unnamed tributary SE of Bremermann Road near the W boundary of the refuge (Fig. 2A). Common trees in the subcanopy include *Acer rubrum* L. var. *drummondii* (Hook. & Arn. ex Nutt.) Sarg. (swamp red maple) and *Fraxinus caroliniana* Mill. (water ash). Common shrubs are *Cephalanthus occidentalis* L. (buttonbush), *Cornus foemina* Mill. (gray dogwood), *Itea virginica* L. (Virginia-willow), and *Planera aquatica* (Walt.) J.F. Gmel. (planertree). Common herbaceous species occurring in soils saturated for long duration include *Echinodorus cordifolius* (L.) Griseb. (heart-leaf burhead), *Iris virginica* L. (southern blue flag), *Panicum gymnocarpon* Ell. (swamp panicgrass), *Polygonum densiflorum* Meisn. (denseflower knotweed), and *Saururus cernuus* L. (lizard's tail). Woody and herbaceous species occuring on small hum-

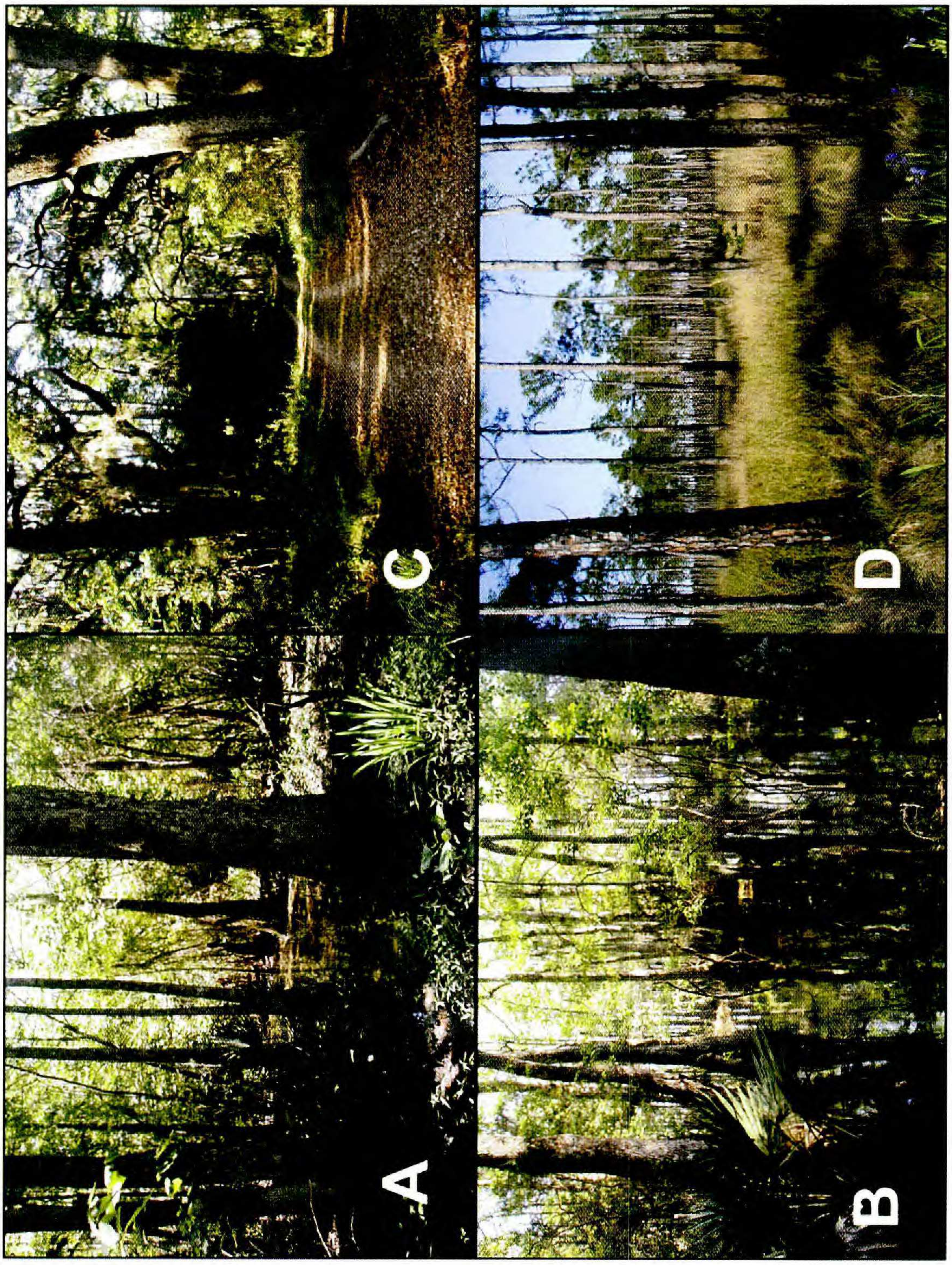

Fig. 2. Plant communities of Big Branch Marsh NWR. **A.** Floodplain swamp along unnamed tributary; trees are *Nyssa aquatica* and *N. biflora*. **B.** *Nyssa biflora* swamp along Boy Scout Road also dominated by *Sabal minor*, *Crataegus opaca*, and *Sapium sebeferum*. **C.** Example of hardwood hammock along Boy Scout Road; trees are *Quercus virginiana*. **D.** Pine flatwoods showing overstory of *Pinus elliottii* var. *elliottii* and lush undergrowth of *Spartina patens* and *Panicum virgatum*.

mocks, tree bases, and other higher places within this forest association include *Carex debilis* Michx. var. *debilis*. (weak caric-sedge), *C. lonchocarpa* Willd. (spear-fruit caric-sedge), *C. louisianica* L.H. Bailey. (Louisiana caric-sedge), *C. reniformis* (L.H. Bailey) Small (kidney-fruit caric-sedge), *C. tribuloides* Wahl. var. *sangamonensis* Clokey. (sangamon blunt broom caric-sedge), *Hypoxis curtissii* Rose (Curtiss' yellow stargrass), *Ilex verticillata* (L.) Gray (winterberry), and *Rhododendron viscosum* (L.) Torr. (swamp azalea).

Nyssa biflora **Pond Seasonally Flooded Forest Alliance (Gum Swamps).** A single unnamed forest association was found within the swamp blackgum Pond Seasonally Flooded Forest Alliance. This unnamed association would be called a swamp blackgum/*Crataegus opaca* Hook. & Arn. (mayhaw) Pond Seasonally Flooded Forest Association. The canopy of this association is dominated by swamp blackgum with the mid-story dominated by mayhaw, and is rare at BBMNWR. This association is a ponded wetland within an upland forest and should have a conservation rank of G3. Another woody species present is *Sapium sebiferum* (L.) Roxb. (Chinese tallow-tree). *Lemna minor* L. (lesser duckweed) commonly forms a dense mat on the water's surface. Characteristic herbaceous species on pond margins can include *Carex gigantea* Rudge. (giant caric-sedge), *C. glaucescens* Ell. (southern waxy sedge), *C. joorii* L. H. Bailey (cypress swamp sedge), southern blue flag, *Sabal minor* (Jacq.) Pers. (dwarf palmetto), *Spiranthes odorata* (Nutt.) Lindl. (fragrant ladies'-tresses), and *Woodwardia areolata* (L.) Moore. (netted chainfern). During times of drought or low water, exposed soils are quickly colonized with species such as *Eragrostis hypnoides* (Lam.) B.S.P. (creeping lovegrass), *Heliotropium indicum* L. (Indian heliotrope), and *Lindernia dubia* (L.) Penn. (false pimpernel). An example of this alliance can be viewed S of Boy Scout Road, near its terminus at Bayou Lacombe (Fig. 2B).

Pinus taeda **Planted Forest Alliance (Pine Savanna).** A *Pinus taeda* L. (loblolly pine) Planted Forest Association borders the refuge boundaries N of Bayou Paquet Road, just E of its intersection with Transmitter Road. Clearcut portions of this association have developed into herbaceous bogs that overlap into clearings and fire-brakes on refuge boundaries.

Pinus taeda **Forest Alliance (Mixed Woods).** This alliance serves as a placeholder for refuge successional forests dominated by loblolly pine. We did not assign an association name due to the great floristic variation in this alliance. However, quanitative analysis would surely yield numerous associations. Other canopy dominates include *Liquidambar styraciflua* L. (sweetgum), *Nyssa sylvatica* Marsh. (blackgum), *Quercus similis* Ashe. (swamp post oak), *Q. falcata* Michx. var. *pagodifolia* Ell. (cherrybark oak), and southern red oak. Shrub and herbaceous strata are well developed and species composition varies with microtopography and hydrologic regime. See the annotated checklist for other species found in this alliance.

***Quercus laurifolia–Nyssa biflora* Saturated Forest Alliance (Forest Swales).** This alliance best describes associations encountered in forest swales and drainages within mixed woods. The swamp blackgum-*Quercus laurifolia* (diamondleaf oak)-*Quercus phellos* (willow oak) / dwarf palmetto Forest Association (G3) is common in the refuge. Other common woody species include swamp red maple, mayhaw, and water oak. Herbaceous vegetation is often sparse or absent under dense canopies. However, in clearings and forest openings herbaceous species include Louisiana caric-sedge, southern blue flag, *Leersia lenticularis* Michx. (catchfly grass), *Rhynchospora corniculata* (Lam.) Gray. (shortbristle horned beaksedge), lizard's tail, and netted chainfern.

***Quercus* (*michauxii*, *falcata* var. *pagodifolia*, *shumardii*)–*Liquidambar styraciflua* Temporarily Flooded Forest Alliance (Oak-Hickory Ridge).** This alliance best describes unnamed associations that occupy the forested portions of BBMNWR dominated by *Quercus michauxii* Nutt. (swamp chestnut oak) and sweetgum. *Quercus shumardii* Buckl. (shumard oak) is absent on BBMNWR. A community dominated by swamp chestnut oak, sweetgum, pignut hickory, and swamp post oak exists on a broad ridge that spans NW of a small day-use parking area at the intersection of Bertha Lane and Lucille Road. This association also occurs as a transition or fringe allied with other forest associations.

***Quercus virginiana* Temporarily Flooded Forest Alliance (Hardwood Hammocks).** A single association was placed under this alliance, a *Quercus virginiana* Mill. (live oak) / (dwarf palmetto, *Serenoa repens* (Bartram) J. K. Small [saw palmetto]) Forest Association. At the terminus of Boy Scout Road, a live oak forest occurs on old archeological features, and grades into low lying areas that are temporarily flooded during storm events (Fig. 2C). The shrub stratum is poorly developed with a few scattered dwarf palmetto. Herbaceous cover is sparse with slender spikegrass, and *Elephantopus* spp. (elephant's-foot). Saw palmetto is absent at BBMNWR.

Woodland Alliances

***Pinus elliottii* Saturated Temperate Woodland Alliance (Pine Flatwoods).** This alliance is represented by the *Pinus elliottii* Engelm. var. *elliottii* (slash pine)/ *Spartina patens* (Ait.) Muhl. (saltmeadow cordgrass)-*Juncus roemerianus* Scheele. (black needlerush)-(*Panicum virgatum* L. [switchgrass]) Woodland Association (G3). These flat, low-lying wetlands adjacent to the refuge marshes have an open to sometimes dense canopy of slash pine. Subcanopy and shrub layers are usually absent, though species such as *Morella cerifera* (L.) Small (wax myrtle), *Iva frutescens* L. (maritime marsh-elder), dwarf palmetto, *Baccharis halimifolia* L. (groundsel-tree), *B. angustifolia* Michx. (saltwater false-willow), and Chinese tallow tree may be present, particularly in areas not subjected to fire. The herbaceous stratum is dense and is dominated by saltmeadow cordgrass, switchgrass, *Solidago sempervirens* L. (seaside goldenrod), and *Euthamia leptocephala* (Torr. & Gray) Greene. (bushy fragrant-goldenrod). Other conspicuous though less common herbs include *Symphyotrichum* spp., *Eryngium yuccifolium* Michx. (rattlesnake master), *Oxypolis filiformis* (Walt.) Britt. (leafless cowbane), and *Asclepias lanceolata* Walt. (lance-leaf milkweed). This association is not inundated by normal daily tides, but receives inundation during storm events. Water tables are high due to landscape position and soil texture. Within this association are a few scattered stands of *Cladium mariscus* (L.) Pohl subsp. *jamaicense* (Crantz) Kükenth. (sawgrass). The best place to observe this association is along Boy Scout Road (Fig. 2D).

***Pinus palustris–Pinus* (*echinata*, *taeda*) Woodland Alliance (Longleaf Pine Savanna)**. A *Pinus palustris* Mill. (longleaf pine)-*Pinus* (*echinata* [shortleaf pine], loblolly pine) / *Schizachyrium scoparium* (Michx.) Nash. (little bluestem) Woodland Association represents this alliance at BBMNWR. Subcanopy species include saplings of the nominal species and swamp post oak. Dominant shrubs are *Ilex vomitoria* Ait. (yaupon) and wax myrtle. Herbaceous cover is dense and is dominated by little bluestem, *Andropogon* spp., and *Aristida longespica* Poir. var. *geniculata* (Raf.) Fern. (plains threeawn). This forest occurs on mesic flats near Lake Pontchartrain that are periodically inundated by storm events. This community is somewhat inaccessible and located several miles from paved roads in the Salmen Tract in the city of Slidell. Near the end of the study, a prescribed burn management regime was initiated in this woodland alliance. This will undoubtedly alter the community composition.

Herbaceous Alliances

***Nymphaea odorata* Permanently Flooded Temperate Herbaceous Alliance (Sloughs).** This alliance is represented by a single association, the *Nymphea odorata* Ait. var. *odorata* (white water lily) Herbaceous Vegetation Association. This association occurs as semipermanently flooded sloughs, ditches, borrow ponds, and marsh ponds, usually within other communities. The best place to observe this association is from an interpretive station along Boy Scout Road near the parking area (Fig. 3A).

***Sagittaria lancifolia* Semipermanently Flooded Herbaceous Alliance (Fresh Marsh)**. Two associations represent this alliance. The first is a *Sagittaria lancifolia* L. (lanceleaf arrowhead) Herbaceous Vegetation Association (G3). This shallow freshwater marsh is dominated by a monoculture of lanceleaf arrowhead and is best observed along Boy Scout Road (Fig. 3B). The second is an unnamed association that forms dense marsh fringes along Cane Bayou (Fig. 3C). This association, based on field observations, would be called a lanceleaf arrowhead-*Schoenoplectus tabernaemontani* (K.C. Gmel.) Palla (softstem bullrush)-*Schoenoplectus americanus* (Pers.) Volk. (olney threesquare) Herba-

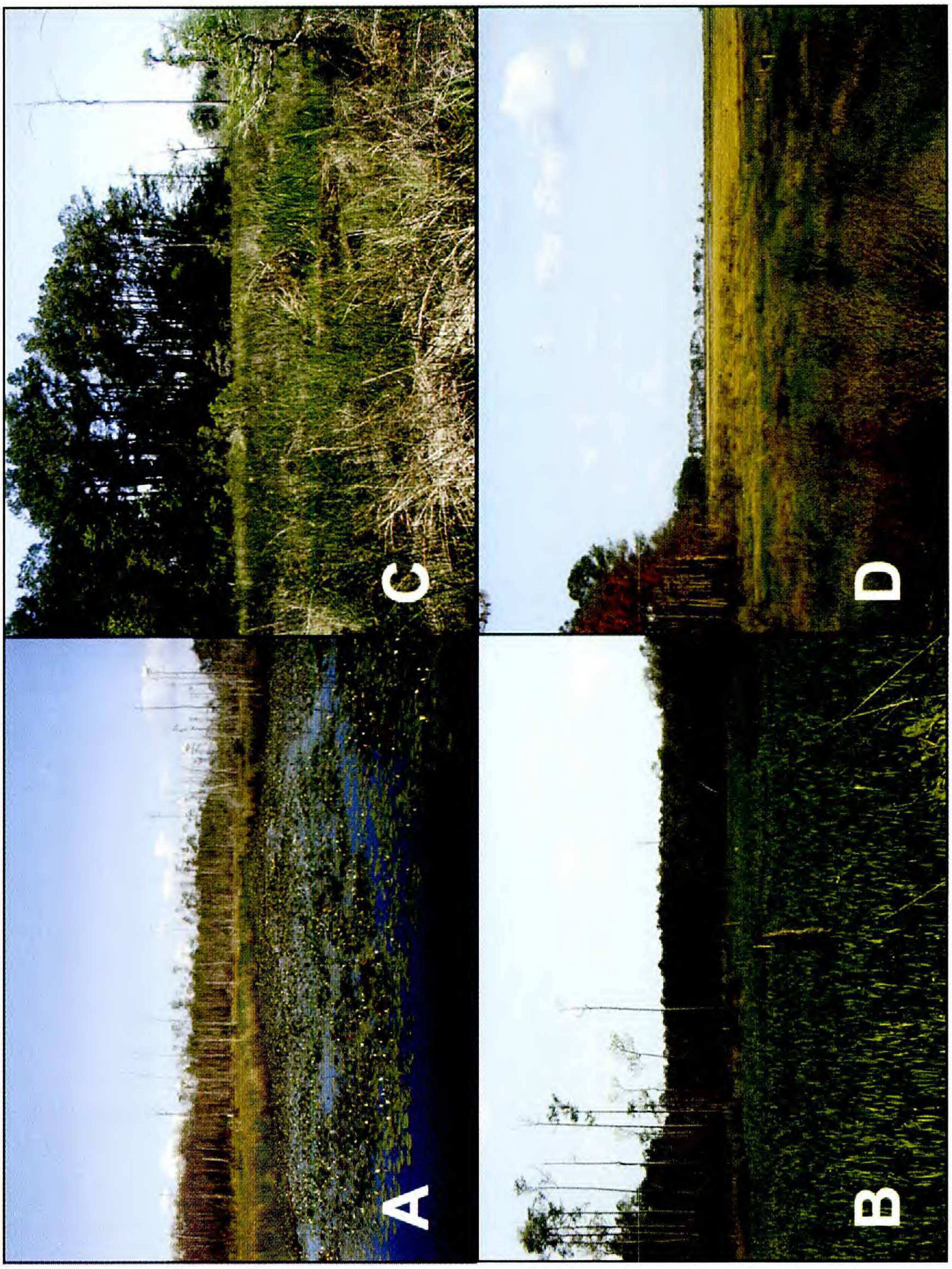

Fig. 3. Plant communities of Big Branch Marsh NWR. **A.** Slough along Boy Scout Road with *Nymphea odorata* var. *odorata* rimmed with dead pines that have succumbed to subsidence. **B.** Fresh marsh along Boy Scout Road dominated by *Sagittaria lancifolia* and adjacent pine flatwoods. **C.** Fresh marsh of *Schoenoplectus tabernaemontani*, *S. americanus*, and *Eleocharis palustris* adjacent to Bayou Cane. **D.** Sharp transition from intermediate marsh community to flatwoods.

ceous Vegetation Association with a proposed conservation rank of G3. Other common herbaceous species include *Eleocharis palustris* (L.) R. & S. (great plains spikerush), *Ptilimnium capillaceum* (Michx.) Raf. (thread-leaf mock bishop's-weed), and *Alternanthera philoxeroides* (Mart.) Griseb. (alligator weed). A few widely scattered *Taxodium ascendens* Brongn. (pond cypress) are present in this association.

***Spartina alterniflora* Tidal Herbaceous Alliance (Smooth Cordgrass Marsh).** The *Spartina alterniflora* Lois. (saltmarsh cordgrass) Louisianian Zone Herbaceous Vegetation Association occurs as monotypic bands of saltmarsh cordgrass along tidal streams, canals, and littoral zones on the shore of Lake Pontchartrain.

***Spartina patens*–(*Distichlis spicata*) Tidal Herbaceous Alliance (Intermediate Marsh).** The saltmeadow cordgrass-*Schoenoplectus* (olney threesquare, *pungens* [Vahl] Palla [common threesquare])-(*Distichlis spicata* (L.) Greene [saltgrass]) Herbaceous Vegetation Association (G3) inhabits the refuge marshes inundated by spring tides. *Bolboschoenus robustus* (Pursh) Soják (Alkali Bulrush) replaces olney threesquare and common threesquare as found elsewhere in marshy sites at BBMNWR. Other common herbaceous species include switch grass, *Eleocharis cellulosa* Torr. (Gulf Coast spikerush) and black needlerush. A band of shrubs including groundsel-tree and maritime marsh-elder can occur as a transition zone between this association and dryer communities or in small scattered thickets. The best place to observe this community is from the observation platform on Boy Scout Road (Fig. 3D).

***Vallisneria americana* Permanently Flooded–Tidal Herbaceous Alliance (Grass Beds).** A *Vallisneria americana* Michx. (American eelgrass) Estuarine Bayou Herbaceous Vegetation Association (G3) occurs along the shores of Bayou Bonfuca, several tidal canals, sloughs, and marsh ponds. Other aquatic plants common in this association include *Myriophyllum sibiricum* Kom. (siberian water-milfoil), *Ruppia maritima* L. (wigeongrass), and *Zannichellia palustris* L. (horned pondweed).

EXOTIC SPECIES OF CONCERN

The following non-native species are, or have the potential to become, serious and difficult to control weeds and may threaten the diversity of plant communities of BBMNWR. **Woody Species:** Chinese tallow-tree, a native of China and Japan, and a tenacious weed of the SE United States, was encountered in most of the refuge forests and woodlands. This species is not well established in these habitats, but should be monitored closely. *Ligustrum sinense* Lour. (common privet), a native of Europe, is well established and frequent in mixed woods and oak hickory forests. *Poncirus trifoliata* (L.) Raf. (trifoliate orange) is native to Asia. This species has escaped from cultivation near an old homesite at the terminus of Boyscout Road and has become well established in hardwood hammocks. Armed with stout spines, this shrub forms inpenetrable thickets. Another native to Asia, *Rosa bracteata* J. Wendl. (Macartney rose), is occasional in mixed woods. **Woody and Herbaceous Vines:** *Lonicera japonica* Thunb. (Japanese honeysuckle) is a climbing vine that was occasionally encountered in oak hickory forests. A more troublesome herbaceous vine was *Lygodium japonicum* (Thunb.) Sw. (Japanese climbing fern), a native of Asia and the Austral Tropics. This vine was well established in mixed and beech magnolia woods. **Herbaceous Species:** *Alternanthera philoxeroides* (Mart.) Griseb. (alligator weed), native to Australia, was frequent in fresh marsh and ditches. *Colocasia esculenta* (L.) Schott (wild taro), a native to Asia, was restricted to roadside ditches SE of Bremermann Road near the W boundary of the refuge. *Imperata brasiliensis* (L.) Beauv. (Imperata) is Native to Tropical America and becoming well established along Boyscout Road and other nearby locations. Other grasses occasional to frequently abundant in disturbed areas with the potential to become a problem include *Paspalum dilatatum* Poir. (dallis-grass) and *Paspalum urvillei* Steud. (Vasey-grass), both native to South America, *Paspalum notatum* Flüggé. (bahia-grass) native to Latin America, and *Sorghum halepense* (L.) Pers. (Johnson-grass), native to the Mediterranean.

ANNOTATED CHECKLIST OF SPECIES

Plant names are arranged by class, and then listed alphabetically within class by family, genus, species, and infraspecific rank using the classification systems found in Cronquist (1981), Kartesz (1994), Jones et al. (1997), or more recent classifications found in monographs. Applicable synonymy for select species is provided when considered useful. Each taxon is followed by a brief description of its habitat type(s). Next is a subjective estimate of relative abundance using the following scheme: very rare–known from only a single locale with few individuals; rare–known from more than one locale, generally with small populations or one locale with numerous individuals; infrequent–not always in the stated community type(s), usually in small numbers; occasional–often in the community type(s), but rarely in large numbers; frequent–usually encountered in the community type(s), but not always in large numbers; and abundant–expected in the type, usually in large numbers. Collectors and collection numbers are David J. Rosen (DJR), James M. Joyner (JMJ), and Gary M. Couret (GMC). Non-native taxa are based on Thomas and Allen (1993, 1996, 1998) and indicated by an asterisk (*).

LYCOPODIOPSIDA

LYCOPODIACEAE

Lycopodiella alopecuroides (L.) R.Cranfill [*Lycopodium alopecuroides* L.], bogs, frequent, *DJR 1654.*

ISOËTOPSIDA

SELAGINELLACEAE

Selaginella apoda (L.) Spring, oak hickory ridge, occasional, *DJR 969.*

POLYPODIOPSIDA

ASPLENIACEAE

Asplenium platyneuron (L.) Oakes. ex D.C. Eat., oak hickory ridge, occasional, *JMJ 1308.*

BLECHNACEAE

Woodwardia areolata (L.) Moore, forest swales, occasional, *DJR 1384.*

Woodwardia virginica (L.) Sm., mixed woods, occasional, *DJR 1059.*

DENNSTAEDTIACEAE

Pteridium aquilinum (L.) Kuhn, oak hickory ridge, occasional, *DJR 1397.*

DRYOPTERIDACEAE

Onoclea sensibilis L., forest swales, infrequent, *DJR 1388.*

OSMUNDACEAE

Osmunda regalis L, forest swales, occasional, *DJR 1066.*

PARKERIACEAE

**Ceratopteris thalichtroides* (L.) Brongn., gum swamps, very rare, *DJR 1746.*

POLYPODIACEAE

Pleopeltis polypodioides (L.) Andrews & Windham var. *michauxiana* (Weath.) Andrews & Windham, epiphyte on live oaks, frequent, *JMJ 1343.*

LYGODIACEAE

**Lygodium japonicum* (Thunb.) Sw., mixed woods, beech magnolia woods, occasional, *JMJ 1328.*

THELYPTERIDACEAE

Thelypteris kunthii (Desv.) Morton., roadsides, mixed woods, frequent, *DJR 1060.*

PINOPSIDA

PINACEAE

Pinus elliottii Engelm. var. *elliottii*, pine flatwoods, mixed woods, abundant, *DJR 1953.*

Pinus taeda L., pine flatwoods, mixed woods, longleaf pine savanna, abundant, *DJR 984.*

Pinus glabra Walt, beech magnolia woods, ridges, occasional, *DJR 1221.*

Pinus palustris Mill., longleaf pine savanna, frequent, *DJR 1682.*

TAXODIACEAE

Taxodium ascendens Brongn., fresh marsh, infrequent, *JMJ 1303.*

Taxodium distichum L., bayou edge, fresh marsh, occasional, *JMJ 1291.*

LILIOPSIDA

ALISMATACEAE

Echinodorus cordifolius (L.) Griseb., floodplain swamps, frequent, *DJR 1740.*

Sagittaria graminea Michx., borrow ditches, forest swales, frequent, *JMJ 1315.*

Sagittaria lancifolia L., fresh marsh, borrow ditches, abundant, *DJR 1356.*

ALLIACEAE

Allium canadense L., disturbed places, frequent, *DJR 1038.*

AMARYLLIDACEAE

Crinum americanum L., canal W of Lake Road, occasional, *DJR 1241.*

Hymenocallis lirosome (Raf.) Shinners, forest swales, occasional, *DJR 999.*

ARACEAE

Arisaema triphylla (L.) Schott. subsp. *quinatum* (Nutt.) Hutt., oak hickory ridge, infrequent, *JMJ 1273.*

**Colocasia esculenta* (L.) Schott, borrow ditches, rare, *DJR 1225.*

Peltandra virginica (L.) Schott, bayou edge, infrequent, *DJR 1051.*

ARECACEAE

Sabal minor (Jacq.) Pers., mixed woods, forest swales, gum swamps, frequent, *JMJ 1314.*

BROMELIACEAE

Tillandsia usneoides L., mixed woods, frequent, *JMJ 1290.*

COMMELINACEAE

Commelina diffusa Burm., forest swales, frequent, *DJR 1020*.

Commelina virginica L., forest swales, occasional, *DJR 1265*.

Tradescantia hirsutiflora Bush, roadsides, mixed woods, occasional, *DJR 1392*.

Tradescantia virginiana L., oak hickory ridge, occasional, *JMJ 1272*.

CYPERACEAE

Bolboschoenus robustus (Pursh) Soják [*Scirpus robustus* Pursh], intermediate marsh, frequent, *DJR 1230*.

Carex abscondita Mack., beech magnolia woods, occasional, *DJR 1366*.

Carex albicans Willd. ex Spreng. var. *australis* (Bailey) J. Rettig, oak hickory ridge, frequent, *DJR 968*.

Carex albolutescens Schwein., beech magnolia woods, infrequent, *DJR 1374*.

Carex complanata Torr. & Hook., oak hickory ridge, mixed woods, frequent, *DJR 1027*.

Carex crebriflora Wieg., floodplain swamps, infrequent, *DJR 1990*.

Carex debilis Michx. var. *debilis*, floodplain swamps, infrequent, *DJR 1437*.

Carex digitalis Schkuhr ex Willd. var. *floridana* (Bailey) R. Naczi & C. Bryson, beech magnolia woods, occasional, *DJR 1370*.

Carex flaccosperma Dew., oak hickory ridge, frequent, *DJR 1025*.

Carex frankii Kunth, forest swales, infrequent, *DJR 1110*.

Carex gigantea Rudge, gum swamps, rare, *DJR 1103*.

Carex glaucescens Ell., pine flatwoods, occasional, *DJR 950*.

Carex joorii L. H. Bailey, gum swamps, occasional, *DJR 1744*.

Carex lonchocarpa Willd., floodplain swamps, infrequent, *DJR 1436*.

Carex longii Mack., oak hickory ridge, mixed woods, frequent, *DJR 1028*.

Carex louisianica L. H. Bailey, forest swales, floodplain swamps, infrequent, *DJR 1432*.

Carx lurida Wahl., borrow ditches, infrequent *DJR 2003*.

Carex nigromarginata Schwein. var. *floridana* (Schwein.) Kükenth, beech magnolia woods, occasional, *DJR 1974*.

Carex reniformis (L. H. Bailey) Small, floodplain swamps, occasional, *DJR 1435*.

Carex striatula Michx., beech magnolia woods, occasional, *DJR 1369*.

Carex texensis (Torr.) L. H. Bailey, disturbed places, infrequent, *DJR 1041*.

Carex triangularis Bock., beech magnolia woods, occasional, *DJR 1365*.

Carex tribuloides Wahl. var. *sangamonensis* Clokey, beech magnolia woods, floodplain swamps, occasional, *DJR 1368*.

Cladium mariscus (L.) Pohl subsp. *jamaicense* (Crantz) Kükenth., fresh marsh, pine flatwoods, frequent, *DJR 1207*.

Cyperus croceus Vahl., disturbed places, frequent, *DJR 1200*.

Cyperus haspan L., forest swales, frequent, *JMJ 1243*.

Cyperus odoratus L. var. *odoratus*, Intermediate marsh, occasional, *DJR 1672*.

Cyperus polystachyos Rottb., fresh marsh, occasional, *DJR 1259*.

Cyperus pseudovegetus Steud. var. *pseudovegetus*, disturbed places, frequent, *DJR 1085*.

Cyperus retrorsus Chapm., disturbed places, frequent, *DJR 952*.

Cyperus thyrsiflorus Jung., disturbed places, frequent, *DJR 1084*.

Cyperus virens Michx. var. *virens*, disturbed places, Forest swales, frequent, *DJR 1083*.

Eleocharis cellulosa Torr., intermediate marsh, pine flatwoods, frequent, *DJR 896*.

Eleocharis microcarpa Torr. var. *microcarpa*, pine flatwoods, frequent, *DJR 901*.

Eleocharis montevidensis Kunth, palustrine areas, frequent, *DJR 1000*.

Eleocharis obtusa (Willd.) Schult., forest swales, infrequent, *DJR 1026*.

Eleocharis olivacea Torr, fresh marsh mud flats, infrequent, *DJR 1260*.

Eleocharis palustris (L.) R. & S., fresh marsh, abundant, *DJR 1984*.

Eleocharis parvula (R. & S.) Link var. *anachaeta* (Torr.) Svens., fresh and intermediate marsh mud flats, frequent, *DJR 843*.

Eleocharis quadrangulata (Michx.) R. & S., borrow ditches, rare, *DJR 1094*.

Eleocharis tuberculosa (Michx.) R. & S., pine flatwoods, frequent, *DJR 897*.

Fimbristylis caroliniana (Lam.) Fern., pine flatwoods, frequent, *DJR 1249.*

Fimbristylis castanea (Michx.) Vahl., intermediate marsh, frequent, *DJR 922.*

Fimbristylis dichotoma (L.) Vahl., disturbed places, occasional, *DJR 1219.*

**Fimbristylis miliacea* (L.) M. H. Vahl, disturbed places, occasional, *DJR 1706.*

Furiena breviseta (Cov.) Cov., pine flatwoods, occasional, *DJR 898.*

Isolepis carinata Hook. & Arn. ex Torr. [*Scirpus koilolepis* (Steud.) Gl.], wet, sandy forest roads, frequent, *DJR 1349.*

Kylingia brevifolia Rottb., disturbed places, infrequent, *DJR 1049.*

Rhynchospora caduca Ell., mixed woods, frequent, *DJR 1073.*

Rhynchospora cephalantha A.Gray, wet clearcuts, frequent, *DJR 1234.*

Rhynchospora colorata (L.) H. Pfeiffer [*Dichromena colorata* (L.) Hitchc.], pine flatwoods, occasional, *DJR 912.*

Rhynchospora corniculata (Lam.) A. Gray, pine flatwoods, forest swales, frequent, *JMJ 1321.*

Rhynchospora debilis Gale, bogs, frequent, *DJR 1655.*

Rhynchospora elliottii D. Dietr., wet clearcuts, frequent, *DJR 1233.*

Rhynchospora fascicularis (Michx.) Vahl, pine flatwoods, frequent, *DJR 888.*

Rhynchospora gracilenta A. Gray, wet clearcuts, frequent, *DJR 1235.*

Rhynchospora inexpansa (Michx.) Vahl, pine flatwoods, frequent, *DJR 890.*

Rhynchospora perplexa Britt., wet clearcuts, frequent, *DJR 1116.*

Rhynchospora rariflora (Michx.) Ell., wet clearcuts, occasional, *DJR 1120.*

Schoenoplectus americanus (Pers.) Volk. [*Scirpus americanus* Pers.], fresh marsh, frequent, *DJR 1082.*

Schoenoplectus tabernaemontani (K. C. Gmel.) Palla [*Scirpus validus* Vahl], fresh marsh, frequent, *DJR 1081.*

Scleria oligantha Michx., oak hickory ridge, infrequent, *DJR 1029.*

Scleria pauciflora Muhl. ex Willd. var. *pauciflora*, pine savanna, occasional, DJR 1955.

Scleria triglomerata Michx., wet clearcuts, frequent, *DJR 951.*

Scleria verticillata Muhl. ex Willd., longleaf pine savanna, infrequent, *DJR 1697.*

ERIOCAULACEAE

Eriocaulon decangulare L., bogs, occasional, *JMJ 1320.*

HYDROCHARITACEAE

Vallisneria americana Michx., bayous, roadside canals, occasional, *DJR 2005.*

HYPOXIDACEAE

Hypoxis curtissii Rose, floodplain swamps, infrequent, *DJR 1997.*

Hypoxis hirsuta (L.) Cov., roadsides, infrequent, *DJR 990.*

IRIDACEAE

Iris hexagona Walt., borrow ditches, frequent, *DJR 1015.*

Iris virginica L., gum swamps, forest swales, bayou edges, frequent, *JMJ 1297.*

Sisyrinchium atlanticum Bickn., roadsides, frequent, *DJR 1009.*

**Sisyrinchium exile* Bickn., disturbed places, frequent, *DJR 1012.*

JUNCACEAE

Juncus brachycarpus Engelm., pine flatwoods, occasional, *DJR 2007.*

Juncus bufonius L., spoil levees, occasional, *DJR 1408.*

Juncus coriaceus Mack., forest swales, occasional, *DJR 1732.*

Juncus diffusissimus Buckl., borrow ditches, occasional, *DJR 1088.*

Juncus effusus L., borrow ditches, frequent, *DJR 1016.*

Juncus elliottii Chapm., wet clearcuts, frequent, *DJR 1010.*

Juncus marginatus Rostk., disturbed places, occasional, *DJR 1047.*

Juncus polycephalus Michx., borrow ditches, frequent, *DJR 1093.*

Juncus repens Michx., forest swales, occasional, *DJR 1197.*

Juncus roemerianus Scheele, intermediate marsh, abundant, *DJR 986.*

Juncus tenuis willd. var. *dichotomus* (Ell.) Wood, forest swales, occasional, DJR 1982.

Juncus tenuis Willd. var. *tenuis*, forest swales, frequent, *DJR 1994.*

LEMNACEAE

Lemna minor L., gum swamps, frequent, *DJR 1063.*

NAJADACEAE

Najas guadalupensis (Spreng.) Magnus, Cane Bayou canoe launch, frequent, *DJR 1203.*

ORCHIDACEAE

Spiranthes odorata (Nutt.) Lindl., gum swamps, infrequent, *DJR 1745.*

Spiranthes praecox (Walt.) S. Wats., beech magnolia woods, occasional, *JMJ 1312.*

POACEAE

Agrostis hyemalis (Walt.) B.S.P., roadsides, occasional, *DJR 1068.*

Andropogon glomeratus (Walt.) B.S.P. var. *glaucopsis* (Ell.) Mohr, longleaf pine savanna, frequent, *DJR 1664.*

Andropogon glomeratus (Walt.) B.S.P. var. *pumilus* Vasey, longleaf pine savanna, frequent, *DJR 1685.*

Andropogon gyrans Ashe var. *stenophyllus* (Hack.) C. Campb., longleaf pine savanna, frequent, *DJR 1676.*

Andropogon virginicus L. var. *virginicus*, mixed woods, clearcuts, abundant, *DJR 1684.*

Anthaenantia rufa (Ell.) Schult., bogs, infrequent, *DJR 948.*

Aristida longespica Poir. var. *geniculata* (Raf.) Fern., longleaf pine savanna, occasional, *DJR 893.*

Arundinaria gigantea (Walt.) Muhl. subsp. *gigantea*, mixed woods, occasional, *DJR 1423.*

Axonopus fissifolius (Raddi) Kuhlm., pine flatwoods, occasional, *DJR 899.*

**Briza minor* L., roadsides, frequent, *DJR 1014.*

**Bromus catharticus* Vahl, disturbed places, frequent, *DJR 1039.*

Chasmanthium laxum (L.) Yates var. *laxum*, mixed woods, beech magnolia woods, abundant, *DJR 1206.*

Chasmanthium laxum (L.) H. Yates var. *sessiliflorum* (Poir.) Wipff & S. D. Jones, mixed woods, infrequent, *DJR 1731.*

Ctenium aromaticum (Walt.) Wood, bogs, infrequent, *DJR 947.*

**Cynodon dactylon* (L.) Pers., disturbed places, frequent, *DJR 1031.*

Digitaria ciliaris (Retz.) Koel, roadsides, frequent, *DJR 1220.*

Distichlis spicata (L.) Greene, intermediate marsh, frequent, *JMJ 1334.*

**Echinochloa crus-galli* (L.) Beauv. var. *crus-galli*, fresh marsh, occasional *DJR 1268.*

Elymus virginicus L. var. *virginicus*, roadsides, occasional, *DJR 1108.*

Eragrostis elliottii S. Wats., pine flatwoods, occasional, *DJR 895.*

Eragrostis hypnoides (Lam.) B.S.P., gum swamps, frequent, *DJR 1271.*

Eragrostis spectabilis (F. Pursh) E. von Steudel, longleaf pine savanna, infrequent, *DJR 1666.*

**Eremochloa ophiuroides* (Munro) Hack., disturbed places, frequent, *JMJ 1340.*

Hordeum pusilum Nutt., roadsides, frequent, *DJR 1001.*

Imperata brasiliensis* (L.) Beauv., roadsides, occasional, *DJR 1034.* **Federal noxious weed

Leersia hexandra Sw., borrow ditches, occasional, *JMJ 1332.*

Leersia lenticularis Michx., forest swales, occasional, *DJR 1718.*

Leersia oryzoides (L.) Sw., borrow ditches, infrequent, *DJR 1741.*

Leersia virginica Willd., mixed woods, occasional, *DJR 1742.*

Leptochloa fusca (L.) Kunth subsp. *fascicularis* (Lam.) N. Snow., intermediate and fresh marsh, frequent, *DJR 1673.*

**Lolium arundinaceum* (Schreb.) S. J. Darbyshire [*Festuca arundinacea* Schreb.], roadsides, occasional, *DJR 1087.*

**Lolium perenne* L., disturbed places, frequent, *DJR 1091.*

Melica mutica Walt., disturbed roadside, occasional, *DJR 1419.*

Muhlenbergia expansa (Poir.) Trin., pine savanna, infrequent, *DJR 946.*

Oplismenus hirtellus (L.) Beauv., oak hickory ridge, frequent, *DJR 931.*

Panicum aciculare Desv. ex J. Poiret var. *angustifolium* (Ell.) Wipff & S. D. Jones., mixed woods, frequent, *DJR 1414.*

Panicum acuminatum Sw. var. *acuminatum*, oak hickory ridge, infrequent, *DJR 1023.*

Panicum acuminatum SW. var. *fasciculatum* (Torr.) Lelong., mixed woods, frequent, *DJR 1345.*

Panicum anceps Michx., wet clearcuts, infrequent, *DJR 954.*

Panicum boscii J. Poiret, beech magnolia woods, frequent, *DJR 1976.*

Panicum commutatum Schult. var. *joorii* (Vasey) Fern., mixed woods, frequent, *DJR 1378.*

Panicum consanguineum Kunth, mixed woods, frequent, *DJR 1343.*

Panicum dichotomiflorum Michx. subsp. *dichotomiflorum*, disturbed sites, infrequent, *DJR 1659.*

Panicum dichotomum C. Linnaeus var. *lucidum* (Ashe) Lelong, beech magnolia woods, frequent, *DJR 1373.*

Panicum dichotomum L. var. *ramulosum* (Torr.) Lelong, oak hickory ridge, infrequent, *DJR 1396.*

Panicum dichotomum L. var. *roanokense* (Ashe) Lelong, mixed woods, frequent, *DJR 1346.*

Panicum gymnocarpon Ell., floodplain swamps, occasional, *DJR 1737.*

Panicum hians Ell., roadsides, occasional, *DJR 1069.*

Panicum laxiflorum Lam., oak hickory ridge, occasional, *DJR 1375.*

Panicum portoricense Desv. ex Hamilt. var. *nashianum* (Scribn.) Lelong, mixed woods, frequent, *DJR 1347.*

Panicum repens L., wet clearcuts, borrow ditches, abundant, *DJR 1236.*

Panicum rigidulum Nees. var. *rigidulum*, pine flatwoods, occasional, *DJR 1747.*

Panicum rigidulum Nees var. *pubescens* (Vasey) Lelong, longleaf pine savanna, infrequent, *DJR 1691.*

Panicum scoparium Lam., mixed Forests, frequent, *DJR 1193.*

Panicum sphaerocarpon Ell., disturbed sites, frequent, *DJR 1411.*

Panicum verrucosum Muhl., pine flatwoods, wet clearcuts, frequent, *DJR 905.*

Panicum virgatum L., intermediate marsh, pine flatwoods, frequent, *DJR 1239.*

**Parapholis incurva* (L.) C. Hubbard, spoil levees, frequent, *DJR 1416.*

Paspalum conjugatum Berg., disturbed places, frequent, *DJR 1269.*

**Paspalum dilatatum* Poir., disturbed places, frequent, *DJR 1114.*

Paspalum dissectum (L.) L., gum swamps, frequent, *DJR 1210.*

Paspalum floridanum Michx. var. *floridanum*, pine flatwoods, occasional, *DJR 891.*

Paspalum floridanum Michx. var. *glabratum* Engelm. ex Vasey, roadsides, frequent, *DJR 1237.*

Paspalum laeve Michx., pine flatwoods, occasional, *DJR 892.*

Paspalum lividum Trin., borrow ditches, frequent, *DJR 1248.*

**Paspalum notatum* Flüggé, disturbed places, occasional, *JMJ 1326.*

Paspalum plicatulum Michx. var. *plicatulum*, pine flatwoods, occasional, *DJR 1097.*

Paspalum praecox Walt., wet clearcuts, occasional, *DJR 949.*

Paspalum setaceum Michx., longleaf pine savanna, frequent, *DJR 1678.*

**Paspalum urvillei* Steud., disturbed places, occasional, *DJR 900.*

Paspalum vaginatum Sw., spoil levees, frequent, *DJR 1716.*

Phalaris angusta Nees ex Trin., disturbed roadsides, infrequent, *DJR 1402.*

Phalaris caroliniana Walt., disturbed areas, infrequent, *DJR 1412.*

Phragmites communis Trin., along canals, occasional, *DJR 1749.*

**Poa annua* L., roadsides, frequent, *DJR 981.*

**Polypogon monspeliensis* (L.) Desf., disturbed areas, frequent, *DJR 1090.*

Saccharum baldwinii Spreng. [*Erianthus strictus* Baldw.], mixed woods, frequent, *DJR 936.*

Saccharum giganteum (Walt.) Pers. [*Erianthus giganteus* (Walt.) Muhl.], mixed woods, frequent, *DJR 1656.*

Schizachyrium scoparium (Michx.) Nash. var. *scoparium*, pine flatwoods, mixed woods, frequent, *DJR 1662.*

Setaria parviflora (Poir.) Kerguélen, roadsides, frequent, *DJR 1112.*

**Sorghum halepense* (L.) Pers., disturbed places, occasional, *DJR 1205.*

Spartina alterniflora Lois., Intermediate marsh, occasional, *DJR 956.*

Spartina cynosuroides (L.) Roth, intermediate marsh, infrequent, *DJR 1231.*

Spartina patens (Ait.) Muhl., pine flatwoods, intermediate marsh, abundant, *DJR 923.*

Sphenopholus obtusata (Michx.) Scribn., roadsides, frequent, *DJR 979.*

Sporobolus indicus (L.) R. Br., roadsides, frequent, *DJR 1005*.

Sporobolus virginicus (L.) Kunth, spoil levees, frequent, *DJR 1713*.

**Stenotaphrum secundatum* (Walt.) O. Ktze., disturbed places, frequent, *JMJ 1341*.

Tridens ambiguus (Ell.) Schult., pine flatwoods, occasional, *DJR 902*.

Tridens flavus (L.) Hitchc. var. *flavus*, disturbed roadsides, infrequent, *DJR 1750*.

Tridens strictus (Nutt.) Nash, pine flatwoods, occasional, *DJR 903*.

Tripsacum dactyloides (L.) L. var. *dactyloides*, disturbed roadsides, infrequent, *DJR 1201*.

Vulpia octoflora (Walt.) Rydb. var. *octoflora*, disturbed areas, occasional, *DJR 1409*.

Zizaniopsis miliacea (Michx.) Doell & Asch., borrow ditches, fresh marsh, frequent, *DJR 1052*.

PONTEDERIACEAE

Pontederia cordata L., borrow ditches, frequent, *DJR 1070*.

POTAMOGETONACEAE

Potamogeton diversifolius Raf, small lake at Boy Scout Road, infrequent, *DJR 1428*.

RUPPIACEAE

Ruppia maritima L., Bayou Lacombe, marsh ponds, frequent, *JMJ 1292*.

SMILACACEAE

Smilax bona-nox L., mixed woods, infrequent, *DJR 1011*.

Smilax glauca Walt., mixed woods, occasional, *DJR 1352*.

Smilax laurifolia L., bogs, occasional, *DJR 1951*.

Smilax pumila Walt., mixed woods, occasional, *DJR 1385*.

Smilax rotundifolia L., floodplain swamps, mixed woods, frequent, *DJR 970*.

Smilax smallii Morong, mixed woods, frequent, *DJR 1351*.

Smilax tamnoides L., mixed woods, occasional, *DJR 1954*.

Smilax walteri Pursh, beech magnolia woods, occasional, *DJR 1363*.

TYPHACEAE

Typha latifolia L., fresh marsh, borrow ditches, frequent, *DJR 1222*.

XYRIDACEAE

Xyris ambigua Beyr. ex Kunth, pine savanna, occasional, *JMJ 1247*.

Xyris laxifolia Mart. var. *iridifolia* (Chapm.) Kral, pine savanna, occasional, *DJR 1710*.

Xyris stricta Chapm., pine savanna, frequent, *DJR 1198*.

ZANNICHELLIACEAE

Zannichellia palustris L., Bayou Lacombe, marsh ponds, frequent, *JMJ 1293*.

MAGNOLIOPSIDA

ACANTHACEAE

Ruellia humilis Nutt., disturbed places, occasional, *DJR 1053*.

ACERACEAE

Acer rubrum L. var. *drummondii* (Hook. & Arn. ex Nutt.) Sarg., floodplain swamps, forest swales, frequent, *JMJ 1259*.

Acer rubrum L. var. *rubrum*, beech magnolia woods, occasional, *DJR 1359*.

Acer rubrum L. var. *trilobum* Torr. & A. Gray ex K. Koch., forest swales, occasional, *DJR* sight record.

AMARANTHACEAE

**Alternanthera philoxeroides* (Mart.) Griseb., borrow ditches, fresh marsh, frequent, *DJR 915*.

**Amaranthus* cf. *cannabinus* (L.) Sauer, fresh marsh, abundant, *DJR 1264*.

ANACARDIACEAE

Rhus copallinum L., mixed woods, frequent, *DJR 1255*.

Toxicodendron radicans (L.) Kuntze, throughout, abundant, *DJR 2006*.

APIACEAE

**Centella erecta* (L. f.) Fern., pine flatwoods, wet clearcuts, frequent, *JMJ 1220*.

Chaerophyllum tainturieri Hook., disturbed roadsides, occasional, *DJR 1381*.

**Cyclospermum leptophyllum* (Pers.) Sprag. ex Britt. & P. Wils., roadsides, frequent, *DJR 980*.

Eryngium yuccifolium Michx., pine flatwoods, frequent, *DJR 1199*.

Hydrocotyle verticillata Thunb., palustrine areas, frequent, *DJR 1042*.

Oxypolis filiformis (Walt.) Britt., pine flatwoods, occasional, *DJR 1258*.

Ptilimnium capillaceum (Michx.) Raf., floodplain swamps, fresh marsh, frequent, *DJR 2000.*

Sanicula canadensis L., mixed woods, frequent, *DJR 1046.*

APOCYNACEAE

Trachelospermum difforme (Walt.) A. Gray., mixed woods, frequent, *DJR 1337.*

AQUIFOLIACEAE

Ilex cassine L., wet woods, very rare, *DJR 909.*

Ilex decidua T. Walter, wet woods, rare, *DJR 1987.*

Ilex glabra (L.) A. Gray, mixed woods, occasional, *DJR 1348.*

Ilex myrtifolia Walt., mixed woods, frequent, *DJR 1652.*

Ilex opaca Ait., mixed woods, occasional, *DJR 994.*

Ilex verticillata (L.) A. Gray, floodplain swamps, infrequent, *DJR 1989.*

Ilex vomitoria Ait., mixed woods, frequent, *DJR 993.*

ARALIACEAE

Aralia spinosa L., oak hickory ridge, frequent, *JMJ 1344.*

ARISTOLOCHIACEAE

Aristolochia serpentaria L., beech magnolia woods, infrequent, *DJR 1978.*

ASCLEPIADACEAE

Asclepias lanceolata Walt., pine flatwoods, frequent, *JMJ 1304.*

Asclepias longifolia Michx., bogs, infrequent, *DJR 1957.*

Cynanchum angustifolium Pers., pine flatwoods, intermediate marsh, frequent, *DJR 1109.*

Matelea gonocarpos (Walt.) Shinners, beech magnolia woods, infrequent, *JMJ 1301.*

ASTERACEAE

Acmella oppositifolia (Lam.) R. Jansen var. *repens* (Walt.) R. Jansen, disturbed roadsides, occasional, *DJR 1738.*

Ambrosia artemisifolia L., disturbed roadsides, frequent, *JMJ 1345.*

Baccharis angustifolia Michx, pine flatwoods, occasional, *DJR 928.*

Baccharis halimifolia L., disturbed roadsides, pine flatwoods, frequent, *DJR 925.*

Baldunia uniflora Nutt., bogs, infrequent, *DJR 944.*

Bidens aristosa (Michx.) N. Britton, forest swales, occasional, *DJR 1708.*

Bidens mitis (Michx.) Sherff, wet clearcuts, infrequent, *DJR 942.*

Bigelowia nudata (Michx.) DC., pine flatwoods, frequent, *DJR 906.*

Boltonia asteroides (L.) L'Her., pine flatwoods, occasional, *DJR 926.*

Boltonia diffusa Ell., pine flatwoods, occasional, *DJR 1668.*

Carphephorus odoratissimus (J. F. Gmel.) Cass., wet clearcuts, infrequent, *JMJ 1242.*

Carphephorus pseudoliatris Cass., wet clearcuts, occasional, *DJR 945.*

Cirsium horridulum Michx., roadsides, abundant, *JMJ 1262.*

Conoclinum coelestinum (L.) DC. [*Eupatorium coelestinum* L.], roadsides, frequent, *DJR 927.*

**Conyza bonariensis* (L.) Cronq., disturbed roadsides, occasional, *DJR 1277.*

Conyza canadensis (L.) Cronq., spoil levees, infrequent, *DJR 1715.*

Eclipta prostrata (L.) L., borrow ditches, frequent, *DJR 916.*

Elephantopus carolinianus Raeusch., mixed woods, frequent, *DJR 1687.*

Elephantopus elatus Bert., mixed woods, occasional, *DJR 1696.*

Elephantopus nudatus A. Gray, mixed woods, occasional, *DJR 1688.*

Erigeron philadelphicus L., roadsides, occasional, *JMJ 1257.*

Erigeron vernus (L.) Torr. & A. Gray, pine savanna, occasional, *DJR 1956.*

Eupatorium capillifolium (Lam.) Small, disturbed roadsides, waste places, frequent, *JMJ 1227.*

Eupatorium leucolepis (DC.) Torr. & A. Gray, pine savanna, occasional, *JMJ 1225.*

Eupatorium perfoliatum L., mixed woods, occasional, *DJR s.n.*

Eupatorium rotundifolium L., pine flatwoods, occasional, *DJR 1273.*

Eupatorium serotinum Michx., mixed woods, occasional, *DJR* sight record.

Euthamia gymnospermoides Greene, mixed woods, occasional, *DJR 1675.*

Euthamia leptocephala (Torr. & A. Gray) Greene, pine flatwoods, frequent, *DJR 934.*

Gamochaeta purpurea (L.) Cabrera [*Gnaphalium purpureum* L.], waste places, frequent, *DJR 1040.*

Helenium amarum (Raf.) Rock, disturbed roadsides, frequent, *JMJ 1226.*

Helenium flexuosum Raf., roadsides, pine flatwoods, frequent, *DJR 1067.*

Helianthus angustifolius L., pine savanna, frequent, *DJR 941.*

Helianthus heterophyllus Nutt., pine savanna, occasional, *DJR 943.*

*Hypochaeris microcephala (Sch. Bip.) Cabrera var. albiflora (O. Ktze.) Cabrera, roadsides, occasional, DJR 2002.

Iva annua L., disturbed roadsides, frequent, *DJR 1262.*

Iva frutescens L., intermediate marsh, roadsides, abundant, *DJR 1242.*

Krigia caespitosa (Raf.) Chambers, roadsides, frequent, *DJR 1003.*

Mikania scandens (L.) Willd., pine flatwoods, occasional, *JMJ 1231.*

Packera glabella (J. Poiret) C. Jeffrey [*Senecio glabellus* J. Poiret], disturbed areas, infrequent, *DJR 1406.*

Pityopsis graminifolia (Michx.) Nutt., hummocks on marsh edge, occasional, *DJR 1698.*

Pluchea rosea Godfrey, roadsides, frequent, *DJR 1245.*

Pyrrhopappus pauciflorus (D. Don) DC., roadsides, occasional, *DJR 1078.*

Solidago arguta Ait., pine flatwoods, occasional, *JMJ 1223.*

Solidago canadensis L. var. *scabra* (Muhl. ex Willd.) Torr. & A. Gray, disturbed places, occasional, *DJR 1722.*

Solidago rugosa Mill., oak hickory ridge, frequent, *JMJ 1237.*

Solidago sempervirens L., intermediate marsh, pine flatwoods, occasional, *JMJ 1305.*

**Soliva sessilis* R. & P., disturbed places, frequent, *DJR 1963.*

**Sonchus asper* (L.) Hill, rodsides, frequent, *DJR 976.*

Stokesia laevis (Hill) Greene, pine savanna, infrequent, *JMJ 1249.*

Symphyotrichum divaricatum (Nutt.) Nesom [*Aster divaricatus* (Nutt.) Torr. & A. Gray], mixed woods, frequent, *DJR 1669.*

Symphyotrichum dumosum (L.) Nesom [*Aster dumosus* L.], pine flatwoods, occasional, *DJR 933.*

Symphyotrichum lateriflorum (L.) Löve & Löve [*Aster lateriflorus* (L.) Britt.], mixed woods, occasional, *DJR s.n.*

Symphyotrichum patens (Ait.) Nesom [*Aster patens* Ait.], mixed woods, frequent, *DJR 1699.*

Symphyotrichum praealtum (Poir.) Nesom [*Aster praealtus* Poir.], mixed woods, frequent, *DJR 1667.*

Symphyotrichum subulatum (Michx.) Nesom [*Aster subulatus* Michx.], pine flatwoods, frequent, *DJR 924.*

Symphyotrichum tenuifolium (L.) Nesom [*Aster tenuifolius* L.], intermediate Marsh, frequent, *DJR 957.*

**Taraxacum officinale* G.H. Weber ex Wiggers, roadsides, common, *JMJ 1255.*

Verbesina virginica L., roadsides, frequent, *DJR* sight record.

Xanthium strumarium L., roadsides, infrequent, *DJR 1711.*

**Youngia japonica* (L.) DC., roadsides, frequent, *DJR 973.*

BETULACEAE

Carpinus caroliniana Walt., mixed woods, beech magnolia woods, frequent, *DJR 1079.*

BIGNONIACEAE

Bignonia capreolata L., mixed woods, frequent, *DJR 997.*

Campsis radicans (L.) Seem. ex Bur., mixed woods, frequent, *JMJ 1325.*

BORAGINACEAE

**Heliotropium indicum* L., gum swamps, frequent, *DJR 1209.*

Myosotis macrosperma Engelm., mixed woods, frequent, *DJR 1050.*

BRASSICACEAE

Lepidium virginicum L., disturbed places, occasional, *DJR 1048.*

Rorippa palustris (L.) Bess. subsp. *fernaldiana* (Butt. & E. Abbe) B.E. Jonsell, roadsides, occasional, DJR 2001.

BUDDLEJACEAE

Polypremum procumbens L., pine flatwoods, roadsides, occasional, *DJR 1251.*

CALLITRICHACEAE

Callitriche heterophylla Pursh., borrow ditches, occasional, *DJR 1389.*

CAMPANULACEAE

Lobelia brevifloia Nutt. ex A. DC., longleaf pine savanna, occasional, *DJR 1681.*

Lobelia puberula Michx., oak hickory ridge, pine flatwoods, occasional, *JMJ 1234.*

Lobelia spicata Lam., beech magnolia woods, occasional, *DJR 1730.*

Triodanus perfoliata (L.) Nieuw., roadsides, frequent, *DJR 1043.*

CAPRIFOLIACEAE

**Lonicera japonica* Thunb., oak hickory ridge, occasional, *JMJ 1276.*

Sambucus canadensis L., disturbed roadsides, occasional, *DJR 1105.*

Viburnum dentatum L., oak hickory ridge, mixed woods, frequent, *DJR 1107.*

CARYOPHYLLACEAE

**Cerastium glomeratum* Thuill., disturbed roadsides, occasional, *JMJ 1285.*

Spergularia marina (L.) Griseb., spoil levees, frequent, *DJR 1410.*

CERATOPHYLLACEAE

Ceratophyllum demersum L., Cane Bayou canoe launch, frequent, *DJR 1202.*

CISTACEAE

Lechea tenuifolia Michx., frquent, marsh edge, *DJR 1671.*

CLUSIACEAE

Hypericum brachyphyllum (Spach) Steud, pine flatwoods, frequent, *DJR 1247.*

Hypericum cistifolium Lam., pine flatwoods, occasional, *JMJ 1221.*

Hypericum denticulatum Walt., pine flatwoods, occasional, *DJR 1250.*

Hypericum gymnanthum Engelm. & A. Gray, forest swale, occasional, *DJR 1194.*

Hypericum hypericoides (L.) Crantz, oak hickory ridge, frequent, *JMJ 1238.*

CONVOLVULACEAE

Calystegia sepium (L.) R. Br., roadsides, occasional, *JMJ 1313.*

Dichondra carolinensis Michx., waste places, frequent, *DJR 1044.*

Ipomoea sagitata Poir., intermediate marsh, frequent, *DJR 1229.*

CORNACEAE

Cornus foemina Mill, floodplain swamps, frequent, *DJR 1438.*

CUCURBITACEAE

Melothria pendula L., disturbed Forest, occasional, *DJR 1422.*

CUSCUTACEAE

Cuscuta indecora Choisy, intermediate marsh, abundant, *JMJ 1335.*

DROSERACEAE

Drosera capillaris Poir. var. *capillaries*, bogs, frequent, *DJR 1959.*

EBENACEAE

Diospyros vriginiana L., mixed woods, frequent, *DJR 1035.*

ERICACEAE

Rhododendron viscosum (L.) Torr., floodplain swamps, infrequent, *DJR 1988.*

Vaccinium arboreum Marsh., oak hickory ridge, occasional, *JMJ 1266.*

Vaccinium corymbosum L., mixed woods, occasional, *DJR 1341.*

Vaccinium stamineum L., mixed woods, occasional, *DJR 1338.*

EUPHORBIACEAE

Croton capitatus Michx. var. *lindheimeri* (Engelm. & A. Gray) J. Muell.-Arg., roadsides, frequent, *DJR 1274.*

Euphorbia humistrata Engelm., roadsides, disturbed places, frequent, *DJR 1243.*

Euphorbia maculata L., roadsides, disturbed places, frequent, *DJR 917.*

Euphorbia prostrata Ait., roadsides, disturbed places, frequent, *JMJ 1229.*

Phyllanthus caroliniensis Walt., gum swamps, frequent, *DJR 1211.*

**Phyllanthus urinaria* L., roadsides, disturbed places, occasional, *DJR 1218.*

**Sapium sebiferum* (L.) Roxb., mixed woods, gum swamps, pine flatwoods, occasional, *DJR 1106.*

FABACEAE

**Albizia julibrissin* I. Durazz., roadsides, infrequent, *DJR 1213.*

Amorpha fruticosa L., floodplains, occasional, *DJR 1075.*

Baptisia alba (L.) Vent. var. *macrophylla* (Larisey) Isely [*Baptisia lactea* (Raf.) Thieret], mixed woods, occasional, *DJR 1076*.

Centrosema virginiatum (L.) Benth., roadsides, frequent, *DJR 1253*.

Chamaecrista fasciculata (Michx.) E. Greene, mixed woods, frequent, *DJR 1689*.

Desmanthus illinoensis (Michx.) MacM., roadsides, frequent, *DJR 1232*.

Desmodium pauciflorum (Nutt.) DC., mixed woods, oak hickory ridge, frequent, *DJR 1058*.

Desmodium sessilifolium Torr. & A. Gray, mixed woods, frequent, *DJR 1694*.

Erythrina herbacea L., mixed woods, oak hickory ridge, frequent, *JMJ 1300*.

Gleditsia triacanthos L., floodplains, frequent, *DJR 1037*.

Lespedeza capitata Michx., mixed woods, frequent, *DJR 1695*.

**Medicago arabica* (L.) Huds., roadsides, frequent, *JMJ 1261*.

**Medicago lupulina* L., roadsides, occasional, *DJR 1981*.

**Melilotus indicus* (L.) All., roadsides, infrequent, *JMJ 1263*.

Neptunia lutea (Leavenw.) Benth., roadsides, frequent, *DJR 1228*.

Sesbania drummondii (Rydb.) Cory, Intermediate marsh, frequent, *DJR 1227*.

**Sesbania punicea* (Cav.) Benth. Floodplains, occasional, *JMJ 1283*.

Tephrosia spicata (Walt.) Torr. & A. Gray, mixed woods, occasional, *DJR 1702*.

**Trifolium campestre* Schreb.var. *campestre*, disturbed places, occasional, *DJR 1983*.

**Trifolium dubium* Sibth, disturbed places, frequent, *DJR 1045*.

**Trifolium repens* L., disturbed places, frequent, *JMJ 1280*.

**Vicia sativa* L., disturbed areas, frequent, *DJR 1413*.

**Vicia tetrasperma* (L.) Schreb., disturbed roadsides, occasional, *JMJ 1282*.

**Vicia villosa* Roth, disturbed roadsides, common, *DJR 1404*.

Vigna luteola (Jacq.) Benth, intermediate marsh, occasional, *JMJ 1299*.

Wisteria frutescens (L.) Poir, mixed woods, occasional, *DJR 1353*.

FAGACEAE

Fagus grandifolia Ehrh., beech magnolia woods, frequent, *DJR 1266*.

Quercus alba L., mixed woods, infrequent, *DJR 1434*.

Quercus falcata Michx. var. *falcata*, mixed woods, beech magnolia woods, frequent, *JMJ 1331*.

Quercus falcata Michx. var. *pagodifolia* Ell., mixed woods, frequent, *DJR 1095*.

Quercus laurifolia Michx., mixed woods, forest swales, frequent, *DJR 995*.

Quercus marilandica Muenchh., hummocks on marsh edge, rare, *DJR 1700*.

Quercus michauxii Nutt., oak hickory ridge, mixed woods, frequent, *DJR 930*.

Quercus nigra L., mixed woods, forest swales, occasional, *DJR 988*.

Quercus phellos L., forest swales, occasional, *DJR 991*.

Quercus similis Ashe, oak hickory ridge, mixed woods, occasional, *DJR 1342*.

Quercus sinuata Walt. var. *sinuata*, forested swales, rare, *DJR 1113*.

Quercus virginiana Mill., mixed woods, occasional, *DJR 989*.

GENTIANACEAE

Centaurium pulchellum (Sw.) Druce, waste places, infrequent, *JMJ 1307*.

Eustoma exaltatum (L.) Salib. ex G. Don., roadsides, occasional, *JMJ 1338*.

Sabatia calycina (Lam.) Heller, roadsides, occasional, *DJR 1071*.

Sabatia dodecandra (L.) B.S.P., roadsides, infrequent, *JMJ 1339*.

GERANIACEAE

Geranium carolinianum L., roadsides, frequent, *DJR 1006*.

GROSSULARIACEAE

Itea virginica L., floodplain swamps, occasional, *DJR 1995*.

HALORAGACEAE

**Myriophyllum* cf. *aquaticum* (Vell.) Verdc., gum swamps, infrequent, *DJR 1430*.

Myriophyllum pinnatum (Walt.) B.S.P., forest swales, frequent, *DJR 985*.

**Myriophyllum sibiricum* Kom., canals, marsh ponds, abundant, *DJR 1748*.

Proserpinaca pectinata Lam., pine savanna, occasional, *DJR 1117*.

HAMAMELIDACEAE

Hamamelis virginiana L., oak hickory ridge, rare, *JMJ 1265*.

Liquidambar styraciflua L., mixed woods, frequent, *DJR 987*.

HIPPOCASTANACEAE

Aesculus pavia L., beech magnolia woods, occasional, *DJR 1357*.

HYDROPHYLLACEAE

Hydrolea ovata Nutt. ex Choisy, palustirne, frequent, *DJR 1254*

JUGLANDACEAE

Carya glabra (Mill.) Sweet, mixed woods, oak hickory ridge, frequent, *DJR 1280*.

Carya illinoiensis (F. von Wangenheim) K. Koch, abandoned homesite, very rare, *JMJ 1281*.

LAMIACEAE

Hyptis alata (Raf.) Shinners, mixed woods, occasional, *DJR* sight record.

Lycopus rubellus C. Moench, forest swales, occasional, *DJR 1709*.

**Micromeria brownei* (Sw.) G. Bentham, roadsides, infrequent, *JMJ 1286*.

**Perilla frutescens* (L.) Britt., mixed woods margins, occasional, *DJR 1064*.

Salvia lyrata L., roadsides, frequent, *JMJ 1258*.

Scutellaria integrifolia L., mixed woods, frequent, *DJR 1056*.

Scutellaria ovata Hill, mixed woods, frequent, *DJR 1096*.

Stachys crenata Raf., roadsides, frequent, *JMJ 1287*.

Stachys floridana Shuttlw. ex Benth., disturbed areas, infrequent, *DJR 1426*.

Teucrium canadense L., mixed woods, infrequent, *JMJ 1346*.

Trichostema dichotomum L., pine savanna, occasional, *DJR 1690*.

LAURACEAE

Persea palustris (C. Rafinesque-Schmaltz Raf.) Sarg., mixed woods, infrequent, *DJR 1405*.

LENTIBULARIACEAE

Utricularia foliosa L., borrow ponds and ditches, occasional, *DJR 1724*.

Utricularia gibba L., borrow ponds and ditches, occasional, *DJR 1665*.

Utricularia purpurea Walt., pine flatwood ponds, borrow ditches, rare, *DJR 850*.

Utricularia radiata Small, borrow ponds and ditches, occasional, *DJR 977*.

Utricularia subulata L., bogs, frequent, *DJR 1960*.

LINACEAE

Linum medium (Planch.) Britt., pine flatwoods, frequent, *JMJ 1310*.

LOGANIACEAE

Gelsemium sempervirens St.-Hil., oak hickory ridge, frequent, *DJR 966*.

Mitreola petiolata (Walt.) Torr. & A. Gray, roadsides, frequent, *DJR 1275*.

LYTHRACEAE

Cuphea carthagenensis (Jacq.) Macbr., roadsides, frequent, *DJR 913*.

Lythrum lineare L., intermediate marsh, frequent, *DJR 1240*.

MAGNOLIACEAE

Magnolia grandiflora L., beech magnolia woods, frequent, *DJR 1204*.

Magnolia virginiana L., pine savanna, occasional, *JMJ 1319*.

MALVACEAE

Hibiscus aculeatus Walt., mixed woods, occasional, *DJR 1256*.

Hibiscus moscheutos L. subsp. *lasiocarpos* (A. Cavanilles) O. Blanchard, fresh marsh, floodplains, frequent, *DJR 1214*.

Kosteletzkya virginica (L.) K. Presl ex A. Gray, intermediate marsh, occasional *JMJ 1228*.

Modiola caroliniana (L.) G. Don, roadsides, occasional, *DJR 1065*.

Sida rhombifolia L., oak hickory ridge, waste places, abundant, *JMJ 1236*.

MELASTOMATACEAE

Rhexia mariana L., pine savanna margins, frequent, *JMJ 1317*.

MORACEAE

Morus rubra L., floodplains, occasional *DJR 1036*.

MYRICACEAE

Morella caroliniensis (Mill.) Small [*Myrica heterophylla* Raf.], mixed woods, occasional, *DJR 1350*.

Morella cerifera (L.) Small [*Myrica cerifera* (L.) Small], mixed woods, pine flatwoods, frequent, *DJR 974*.

NYMPHACEAE

Nuphar advena (Ait.) Ait. [*N. lutea* (L.) J. E. Sm.], borrow ditches, frequent, *DJR 1263*.

Nymphea odorata Ait. var. *odorata*, borrow ponds and ditches, marsh ponds and sloughs, abundant, *DJR 907*.

NYSSACEAE

Nyssa aquatica L., floodplain swamps, frequent, *DJR 1979*.

Nyssa biflora Walt., tupelo gum swamps, Frequent, *JMJ 1311*.

Nyssa sylvatica Marsh., mixed woods, frequent, *DJR 992*.

OLEACEAE

Fraxinus caroliniana Mill., floodplain swamps, occasional, *DJR 1080*.

**Ligustrum sinense* Lour., oak hickory ridge, mixed woods, frequent, *JMJ 1274*.

ONAGRACEAE

Gaura parviflora Dougl. ex Lehm., roadsides, infrequent, *JMJ 1302*.

Ludwigia alterniflora L., pine flatwoods, occasional, *DJR 1272*.

Ludwigia decurrens Walt., forest swales, occasional, *DJR 1707*.

Ludwigia linearis Walt., pine flatwoods, infrequent, *DJR 1257*.

Ludwigia octovalvis (Jacq.) Raven, borrow ditches, frequent, *DJR 1246*.

Ludwigia palustris (L.) Ell., forest swale, infrequent, *DJR 1340*.

Ludwigia pilosa Walt., mixed woods, frequent, *DJR 1653*.

Oenothera laciniata Hill., disturbed roadsides, occasional, *DJR 1403*.

Oenothera speciosa Nutt., disturbed places, occasional, *JMJ 1296*.

OXALIDACEAE

**Oxalis debilis* Kunth, oak hickory ridge, frequent, *DJR 1022*.

Oxalis dillenii Jacq., disturbed roadsides, occasional, *DJR 1382*.

Oxalis stricta L., roadsides, frequent, *JMJ 1254*.

PASSIFLORACEAE

Passiflora lutea L., beech magnolia woods, infrequent, *DJR 1361*.

PHYTOLACCACEAE

Phytolaca americana L., roadsides, waste places, occasional, *JMJ 1330*.

PLANTAGINACEAE

**Plantago lanceolata* L., disturbed areas, infrequent, *DJR 1427*.

**Plantago major* L., roadsides, frequent, *DJR 958*.

Plantago virginica L., roadsides, frequent, *DJR 1077*.

POLYGALACEAE

Polygala cruciata L., bogs, frequent, *GMC s.n.*

Polygala incarnata L., pine savanna, frequent, *JMJ 1324*.

Polygala leptocaulis Torr. & A. Gray, pine savanna, infrequent, *DJR 1115*.

Polygala lutea L., pine savanna, occasional, *JMJ 1219*.

Polygala ramosa Ell., pine savanna, infrequent, *DJR 1118*.

POLYGONACEAE

Brunnichia ovata (Walt.) Shinners, mixed woodls, frequent, *DJR 1362*.

Polygonum caespitosum Bl., swales in oak hickory ridge, frequent, *DJR 929*.

Polygonum densiflorum Meisn., floodplain swamps, frequent, *DJR 1739*.

Polygonum hydropiperoides Michx., mesic swales in oak hickory ridge, occasional, *DJR 1111*.

Polygonum punctatum Ell., fresh marsh, borrow ditches frequent, *DJR 908*.

Polygonum setaceum Baldw., disturbed places, infrequent, *DJR 1733*.

**Rumex conglomeratus* Murr., waste places, infrequent, *JMJ 1288*.

**Rumex crispus* L., disturbed roadside, occasional, *DJR 1394*.

PRIMULACEAE

Samolus valerandi L. subsp. *parviflorus* (Raf.) Hult., roadsides, occasional, *JMJ 1256*.

RANUNCULACEAE

Clematis crispa L., floodplains, infrequent, *JMJ 1333*.

**Ranunculus marginatus* d'Urv., roadsides, frequent, *DJR 1024*.

**Ranunculus platensis* Spreng., roadsides, frequent, *DJR 972*.

Ranunculus pusillus Poir., floodplains, frequent, *DJR 1062*.

**Ranunculus sardous* Crantz, disturbed places, occasional, *DJR 1980.*

Ranunculus sceleratus L. var. *sceleratus*, floodplain swamps, infrequent, *DJR 1998.*

Thalictrum dasycarpum Fisch. & Avé -Lall., disturbed woods, frequent, *DJR 1421.*

RHAMNACEAE

Berchemia scandens (Hill) K. Koch, floodplains, frequent, *DJR 1390.*

ROSACEAE

Crataegus marshallii Eggl., oak hickory ridge, occasional, *JMJ 1277.*

Crataegus opaca Hook. & Arn., forest swales, gum swamps, frequent, *DJR 978.*

Prunus serotina Ehrh., oak hickory ridge, occasional, *JMJ 1264.*

**Rosa bracteata* J. Wendl., mixed woods, occasional, *DJR 1086.*

**Rosa laevigata* Michx., floodplain swamps, occasional, *DJR 1224.*

Rubus argutus Link, mixed woods, frequent, *DJR 998.*

Rubus trivialis Michx., roadsides, mixed woods, frequent, *DJR 975.*

RUBIACEAE

Cephalanthus occidentalis L., floodplain swamps, occasional, *JMJ 1250.*

Diodia teres Walt., roadsides, frequent, *JMJ 1298.*

Diodia virginiana L., pine savanna, occasional, *JMJ 1244.*

Galium aparine L., roadsides, frequent, *DJR 982.*

Galium obtusum J. Bigelow, disturbed places, frequent, *DJR 1966.*

Galium tinctorium (L.) Scop., disturbed places, swamps, frequent, *DJR 1967.*

Galium uniflorum Michx., beech magnolia woods, infrequent, *DJR 1979.*

Mitchella repens L., mixed woods, infrequent, *DJR 1433.*

Oldenlandia uniflora L., roadsides, infrequent, *DJR 1102.*

RUTACEAE

**Poncirus trifoliata* (L.) Raf., disturbed places, abundant, *DJR 1208.*

Zanthoxylum clava-herculis L., disturbed places, infrequent, *DJR 1055.*

SALICACEAE

Salix nigra Marsh., disturbed places, infrequent, *DJR 983.*

SARRACENIACEAE

Sarracenia alata Wood, bogs, rare, *DJR 1952.*

SAURURACEAE

Saururus cernuus L., floodplain swamps, forest swales, frequent, *DJR 1072.*

SCROPHULARIACEAE

Agalinis fasciculata (Ell.) Raf., roadsides, frequent, *JMJ 1232.*

Bacopa caroliniana (Walt.) Robins, borrow ditches, abundant, *JMJ 1309.*

Bacopa monnieri (L.) Penn, mud flats, frequent, *JMJ 1342.*

Gratiola pilosa Michx., pine savanna, occasional, *DJR 1196.*

Gratiola ramosa Walt., palustrine areas, frequent, *DJR 1008.*

Lindernia dubia (L.) Penn, gum swamps, frequent, *DJR 1212.*

**Mazus pumilus* (Burm.) C. van Steenis, oak hickory ridge, infrequent, *DJR 1021.*

Mecardonia acuminata (Walt.) Small, disturbed places, frequent, *DJR 914.*

Mecardonia vandelliodes (Mill.) Small, roadsides, infrequent, *DJR 1030.*

Micranthemum umbrosum (J. F. Gmel.) Blake, mudflats, frequent, *DJR 1061.*

**Scoparia dulcis* L., oak hickory ridge, frequent, *JMJ 1233.*

**Veronica arvensis* L., roadsides, frequent, *JMJ 1289.*

SOLANACEAE

Solanum carolinense L., roadsides, disturbed places, frequent, *DJR 1057.*

STYRACACEAE

Halesia diptera Ellis, beech magnolia woods, occasional, *DJR 1355.*

Styrax americanus Lam., oak hickory ridge, infrequent, *JMJ 1279.*

SYMPLOCACEAE

Symplocos tinctoria (L.) L'Her., beech magnolia woods, occasional *DJR 1267.*

ULMACEAE

Celtis laevigata Willd., floodplains, frequent, *JMJ 1284.*

Planera aquatica (Walt.) J. F. Gmel., floodplain swamps, occasional, *DJR 1440.*

Ulmus alata Michx., beech magnolia woods, infrequent, *DJR 1736.*

URTICACEAE

Boehmeria cylindrica (L.) Sw., roadsides, frequent, *DJR 1244.*

VALERIANACEAE

Valerianella radiata (L.) Dufr., roadsides, frequent, *DJR 1004.*

VERBENACEAE

Callicarpa americana L., oak hickory ridge, frequent, *JMJ 1235.*

**Lantana camara* L., roadsides, infrequent, *DJR 1092.*

Phyla nodiflora (L.) Greene, roadsides, frequent, *DJR 911.*

**Verbena brasiliensis* Vell., waste places, roadsides, frequent, *JMJ 1306.*

Verbena halei Small, disturbed places, occasional, *JMJ 1295.*

**Verbena rigida* Spreng., disturbed places, occasional, *JMJ 1316.*

Verbena urticifolia L., roadsides, occasional, *DJR 1276.*

VIOLACEAE

Viola lanceolata L., pine savanna, frequent, *DJR 971.*

Viola palmata L. var. *trilobata* (Schwein.) Gingins ex DC., beech magnolia woods, occasional, *DJR 1969.*

Viola primuifolia L., oak hickory ridge, frequent, *DJR 964.*

Viola sororia Willd. var. *sororia*, oak hickory ridge, frequent, *DJR 965.*

VITACEAE

Ampelopsis arborea (L.) Köehne, mixed woods, frequent, *DJR s.n.*

**Cayratia japonica* (Thunb.) Gagnepain, waste places, rare, *DJR 1226.*

Parthenocissus quinquefolia (L.) Planch., mixed woods, frequent, *DJR 1395.*

Vitis astivalis Michx., mixed woods, frequent, *DJR 1339.*

Vitis cinerea (Engelm.) Engelm. ex Millardet, mixed woods, occasional, *DJR 1354.*

Vitis palmata Vahl, oak hickory ridge, occasional, *DJR 1400.*

Vitis rotundifolia Michx., oak hickory ridge, frequent, *JMJ 1278.*

ACKNOWLEDGMENTS

We are grateful to James Harris, Charlotte Parker, Elizabeth Souheaver, and other staff members with the Southeast Louisiana Refuge Complex for their assistance, enthusiasm, and financial support. Special thanks to James Joyner who made many collections and assisted with fieldwork during the early months of this project, and Gary Couret and Todd Miller for their companionship afield. It is a pleasure to thank Anne Bradburn and Steve Darwin at Tulane University for their assistance. The following botanists provided determinations for various specimens; Joseph Wipff (Poaceae), Billie Turner (Asteraceae and Fabaceae), Guy Nesom (Asteraceae), Roland Roberts (Euphorbiaceae and Asteraceae), Kevin Nixon (*Quercus*), James Phipps (*Crataegus*), Bill Reese (*Lycopodium*), and Robert F. C. Naczi (*Carex*). The review and comments of Barney Lipscomb, Charles Allen, and an anonymous reviewer were very helpful in preparing the final manuscript presented here. Our thanks to Ms. Anna Edwards (USFWS) for preparing figure one.

REFERENCES

Allen, C.M. 1992. Grasses of Louisiana, 2nd ed. Cajun Prairie Habitat Preservation Society, Eunice, Louisiana.

Correll, D.S. and M.C. Johnston. 1970. Manual of the vascular plants of Texas. Texas Research Foundation. Renner, Texas.

Cronquist, A. 1980. Vascular flora of the southeastern United States, Volume 1, Asteraceae. Univ. of North Carolina Press, Chapel Hill.

Cronquist, A. 1981. An integrated system of classification of flowering plants. Columbia Univ. Press, New York.

Ellis, F.S. 1981. St. Tammany Parish: L'autre cote du lac. Pelican Publishing Company, Gretna.

Fenneman, N.M. 1928. Physiographic divisions of the United States. Annals Associ. Amer. Geographers 18: 261–353.

Fisk, H.N. and E. McFarlan, Jr. 1955. Late Quaternary Deltaic Deposits of the Mississippi River. In: The crust of the earth. Geol. Soc. Amer., Special Pap. 62:279–302.

Gandhi, K.N. and R.D. Thomas. 1989. Asteraceae of Louisiana. Sida, Bot. Misc. No. 4:1–202.

Godfrey, R.K. 1988. Trees, shrubs, and woody vines of Northern Florida and adjacent Georgia and Alabama. Univ. of Georgia Press, Athens.

Godfrey, R.K. and J.W. Wooten. 1979. Aquatic and wetland plants of the southeastern United States. Monocotyledons. Univ. of Georgia Press, Athens.

Godfrey, R.K. and J.W. Wooten. 1981. Aquatic and wetland plants of the southeastern United States. Dicotyledons. Univ. of Georgia Press, Athens.

Gould, F.W. 1975. The grasses of Texas. Texas A&M Univ. Press, College Station.

Isely, D. 1990. Vascular flora of the southeastern United States, Volume 3, Part 2, Leguminosae (Fabaceae). Univ. of North Carolina Press, Chapel Hill.

Jones, S.D., J.K. Wipff, and P.M. Montgomery. 1997. Vascular plants of Texas: A comprehensive checklist including synonymy, bibliography, and index. University of Texas Press, Austin, Texas.

Kartesz, J.T. 1994. A synonomized checklist of the vascular flora of the United States, Canada, and Greenland. Timber Press, Portland.

Lellinger, D.L. 1985. A field manual of the ferns & fern-allies of the United States & Canada. Smithsonian Institution Press, Washington, D.C.

Lelong, M.G. 1986. A taxonomic treatment of the genus *Panicum* (Poaceae) in Mississippi. Phytologia 61:251–269.

Radford, A.E., H.E. Ahles, and C.R. Bell. 1968. Manual of the vascular flora of the Carolinas. Univ. of North Carolina Press, Chapel Hill.

Saucier, R.T. 1963. Recent geomorphic history of the Pontchartrain Basin. Coastal Studies Ser. No. 9. Louisiana State University Press, Baton Rouge.

Steinmayer, R.A. 1939. Bottom sediments of Lake Pontchartrain. Bull. Amer. Assoc. Petrol. Geols. 23:1–23.

Thomas, R.D. and C.M. Allen. 1993. Atlas of the vascular flora of Louisiana, Volume I: fern allies, conifers, and monocotyledons. The Natural Heritage Program, Wildlife Div., Louisiana Dept. of Wildlife & Fisheries, Baton Rouge, LA.

Thomas, R.D. and C.M. Allen. 1996. Atlas of the vascular flora of Louisiana, Volume II: dicotyledons, Acanthaceae-Euphorbiaceae. The Natural Heritage Program, Wildlife Div., Louisiana Dept. of Wildlife & Fisheries, Baton Rouge, LA.

Thomas, R.D. and C.M. Allen. 1998. Atlas of the vascular flora of Louisiana, Volume III: dicotyledons, Fabaceae-Zygophyllaceae. The Natural Heritage Program, Wildlife Div., Louisiana Dept. of Wildlife & Fisheries, Baton Rouge, LA.

Trahan, L., J.J. Bradley, and L. Morris. 1990. Soil survey of St. Tammany Parish, Louisiana. Soil Conservation Service, U. S. Dept. of Agriculture, Washington, DC.

Weakley, A.S., K.D. Patterson, S. Landaal, M. Pyne, and others (compilers). 1998. International classification of ecological communities: Terrestrial vegetation of the southeastern United States. Working Draft of March 1998. The Nature Conservancy, Southeast Regional Office, Southern Conservation Science Department, Community Ecology Group. Chapel Hill, NC.